IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF WEST VIRGINIA AT CLARKSBURG

	} } }
Gerald W. Corder, et al,	}
Plaintiffs,	}
vs	Civil Action No. 1:18-00030
Antero Resources Corporation,	}
Defendant.	} } }

Supplemental Expert Report

Daniel T. Reineke, P.E.

September 25, 2020

I was requested to provide an additional report and also address additional claims made by Antero's attorneys that the plaintiffs' gas was not processed from August 2018 to the present. Also, I had understood that I would have an opportunity to provide an additional report setting forth a rebuttal to defendant's expert opinions by Kris L. Terry. I was just informed yesterday that if I had a rebuttal that it needed to be included in this report. I will address these issues in this report which required a thorough review of old data and the information supplied later, after my deposition. Ms. Terry provided an opinion on each lease belonging to the plaintiffs and whether deductions would be allowed or not based upon her background. The rebuttal and the new information issues from new data are set forth. I address these issues below.

I have extensive background in reading oil and gas leases and agreements from my involvement as a producer and lessor and my review of hundreds of oil and gas leases and agreements involving sale of leases, mineral interests, and requirements for paying royalty to lessors and the calculation of royalty including whether the lease in the particular jurisdiction allows for deduction from royalty. I understand that the Court generally, if not always, determines rights under contracts. Subject to that understanding, based upon the leases and relevant agreements between the parties in this case, and my own experience and education, I hold opinions concerning the right of the parties in this case. My experience in West Virginia with oil and gas leases includes investigation and testimony in Tawney and my knowledge of that decision and my participation as an expert in many other oil and gas cases in West Virginia.

Antero produces natural gas from certain of the subject tracts of the plaintiffs. I refer to the attached **Exhibit 1** for the list of leases involved. I have been provided relevant data which Antero's counsel provided to plaintiffs' attorneys. I also was provided the deposition and all exhibits from the deposition of Antero by Alvyn A. Schopp, Chief Administrative Officer and Regional Senior Vice President for Antero Resources Corporation who was designated to testify

for Antero. (Schopp Deposition, pp. 5-6.) Mr. Schopp testified that the Vice President of Human Resources, Vice President of IT, Health, Safety and Environmental, Internal Audit, Procurement, the General Counsel and all legal departments, and Insurance and Risk Management Departments for Antero all report to Mr. Schopp. (7-8.) That represents or describes some of his background and responsibility with Antero as Chief Administrative Officer (CAO). He also is Regional Senior Vice President of Antero which entails having the responsibility for all of Antero's field employees in West Virginia and Ohio. (7-8.) He reports directly to Antero's President and CFO of the Upstream company and directly to Paul Rady, who is the Chairman of the Board and CEO. Id. Phil Yoo is the Vice President of Accounting for Antero.

Antero testified that the gas and liquid products from plaintiffs' wells are processed and that they would go up north to MarkWest. *See Al Schopp Deposition*, p. 89. The spreadsheets of data and other documents produced by Antero and testified to by Antero, shows the plaintiffs' wells and accounting for the wells in this case. (92). The documents show all of the different individual hydrocarbons produced from plaintiffs' wells and gas which are subject to this case. (92-93). The data also shows that Antero takes deductions from the liquid sales. (94).

Antero pays lessors based on weighted average sales prices (WASP). The sales price which is used by Antero for each well is based also upon gas meter specs which Antero shows how rich the gas is in NGL's, and determines the percent of each NGL product such as % ethane, % butane, etc. (48-49.)

The NGL Products

Antero processes for sale ethane, propane, normal butane, isobutane, pentane and gasoline as soluble liquids from its wells, including plaintiffs' wells. (42.) Antero maintained ownership in the gas and liquids until they are processed and marketed. (17.)

Antero Midstream, LLC owns Antero's pipelines and it is a subsidiary of Antero. But Antero has other gathering companies, as well. (53-54.) The fees charged to lessors of the gathering of oil and gas include the fees charged by Antero Midstream and other midstream companies. (54-55.) The low pressure lines convey the gas from the well to the compressor station and then high pressure lines transport the gas from the compressor to the processing plant or to the interstate pipeline. (56-57.) Liquids (NGL's) are separated from the gas at the processing plant at Sherwood and the NGL's are transported to fractionation facility.

MarkWest sells some of Antero's products, and sometimes Antero sells the products themselves. MarkWest and Antero have agreements which provide for MarkWest to sell much of these products. Antero sometimes takes the products in-kind and sells them itself. (42-43.)

Antero has contracts with MarkWest for various services such as gathering, transmission and processing of natural gas for the liquids (NGL's) which are part of the plaintiffs' product produced from plaintiffs' leasehold interests. (17.) MarkWest keeps and maintains records of the volumes of gas it gathers from each well. MarkWest maintains records of the raw gas it processes into residue gas and NGL's, including the fractionated purity products. MarkWest then provides the back-up information to Antero for its use in accounting and paying royalty on plaintiffs' gas and NGL products. (19.) Antero pays MarkWest a fee for processing the gas and fractionating the liquids. (16.)

PRC-2 Products

Antero states that it pays lessors for the NGL's gross value minus what it calls PRC-2 which is shown on the lessors' statement (20-21.) PRC-2 represents what MarkWest bills Antero for processing the gasand fractionation fees, including Mariner East¹ fess. (21-21.)

¹ Mariner East sometimes is utilized to transport to the sale point NGL products. (21.)

Royalty/Deductions

Antero claims that if the lease does not allow deductions, then Antero does not charge or deduct fees off of the gross sales price. (77-78.) If the leases are in a pool, like the plaintiffs' leases, Antero claims to differentiate each lessor for each lease, including the volume of gas and NGL's produced from that well and the lessor's ownership percentage of each lease and the acreage percent of the lease compared to the acreage in the pool. The NGL volumes are determined by periodically testing the well for the amount of ethane, butane, etc. in the well's gas stream. (70-77.)

Testing NGL Composition

Antero captures a sample of the production coming from the well in order to analyze the content of the various liquid products, e.g., ethane, butane, etc. (121-122.) After the sample is analyzed the amount of each NGL purity product is calcuated and allocated to the total sales from that well which then is allocated back to the lessor based upon his or her specific interests. (121.)

NGL/Shrink

Antero compares the value of the raw gas produced from each well to the total value of the residue gas and NGL's, less costs, Antero makes this comparison routinely and determines whether a particular lessor would receive more from a raw gas sale or a residue gas/NGL sale. If the calculation proves that the raw gas sale results in more royalty than the residue gas/NGL sale, then they pay royalty on the raw gas value. If it shows more royalty on the residue gas/NGL sales, then they pay royalty on the residue gas and NGL sales. (109-110.)

Market Enhancement

Antero claims that it is entitled to charge lessors with "market enhancement" costs, but only if the specific lease provides for that charge. (86-87.) The only example provided was if the gas is transported to a Chicago market, Antero compares the net after costs to transport the gas to

Chicago in order to get a better price. If the price after deductions for extra costs compared to local markets, like TCO, etc., then Antero claims it can charge the extra cost for the transportation. (85-87.) If the comparison shows that the extra cost to transport the gas to Chicago is less then, for example, the TCO index price, Antero will pay the royalty owner based upon the TCO index price.

The Plaintiffs' Leases

Antero testified, by its witness Mr. Schopp as to the leases which Antero determined were without deductions and those with deductions. If the lease allowed deductions, then Antero explained what they were for. Mr. Schopp explained that there were five categories of leases²:

- 1. Roger Corder lease which Antero said was a "big lease";
- 2. Randall Corder leases;
- 3. Gerald Corder leases;
- 4. Partition leases which were leases subject to a partition lawsuit;
- 5. Nicholson leases.

The Partition and Nicholson Lease

Mr. Schopp explained that a partition lawsuit was brought by Antero against most lessors in this case and that it was subsequently settled and that in the Settlement Agreement, even though Antero believed some of the leases allowed deductions, "we agreed to treat their leases different going forward." (161). According to Antero, those leases are subject to a "Market Enhancement Clause," which allows Antero to do an analysis comparing the value of shrink to the net NGL value, whichever is higher and in addition, they would be subject to TRN-3 charges.³

Roger Corder Lease

Antero claims that the Roger Corder lease did not allow for deductions for TRN-3 but still compares shrink value to net NGL value and then, lessors would be paid based upon the higher

² Also, there was a very small lease in addition to the above.

³A TRN-3 Charges is a deduction for transportation.

result and also the royalty would not be subject to TRN-3 or PRC-2.4

Randall Corder and Gerald Corder Leases

These two leases are addressed in the Settlement Agreement, so according to Mr. Schopp, they get the same treatment as the Roger Corder lease, "the accounting for them (according to Antero), is exactly like the Roger Corder lease," in other words, no PRC-2 and no TRN-3. (163). Antero said of the Roger, Randall and Gerald Corder leases that they would get "practically no deductions". (164).

The Sisters Lease⁵

The Sisters leases are treated by Antero as "net factory value," for NGL's on their two leases. Antero does the shrink/NGL value comparison and if the NGL value is higher, Antero subtracts TRN-3 and PRC-2. However, with the Roger, et al. leases, the Sisters are treated the same as the other lessors under the Roger Corder, et al. leases. "It is effectively market enhancement" treatment. According to Mr. Schopp, the only deductions they would get are potentially TRN-3 and PRC-2 depending on net factory value.

The Comparison of Shrink vs. NGL

Antero pays the lessors the higher of the value of the raw gas compared to the NGL value, plus the value of the residual gas less costs. The comparison is done after deduction of all the costs from the NGL values. Consequently, it is rare for a lessor to receive any value for the NGL's. If the lease provides for no deductions from NGL's, then the lessor's rights to receive the correct royalty for NGL's without deductions is essentially eliminated because the NGL value plus residual gas value minus the costs when compared to raw gas value without deductions will usually always be more for the gas without deductions.

⁴ A PRC-2 deduction is a deduction for production.

⁵ Antero referred to the "sisters" being Marlyn Sigmon, Janet Packard and Garnett Cottrill.

The Settlement Agreement and Enhancement Clause

The Settlement Agreement that is referred to by Antero in the Schopp deposition is dated August 2015. The agreement provided for release of Antero and others up to the date of the agreement. Also, the agreement provided for alteration of earlier leases and added a market enhancement clause to the leases. The market enhancement clause says that notwithstanding any language:

"All oil, gas, or other proceeds accruing to the Lessor under this lease or by state law shall be without deduction, directly or indirectly, for the costs of producing, gathering, storing, separating, treating, dehydrating, compressing, processing, transporting, and marketing the oil, gas, and other products produced hereunder to transform he product into marketable for; however, any such costs which result in enhancing the value of the marketable gas, oil or other products to receive a better price may be deducted from Lessor's share of production so long as they are based on Lessee's actual costs of such enhancements."

The clause plainly provides for no costs or deductions of any kind from plaintiffs' gas or the NGL's entrained in the gas. The statement that there be no costs, direct or indirect from oil, gas and "other products" produced certainly includes NGL's, which is an "other product". Also, the "enhancement" language also includes "other products", this includes the NGL's. The first sentence says that there can be no deductions for the other products (NGL's), including deductions for separating, processing, etc. of the NGL's to put them into a marketable form. The enhancement clause could not come into play because the "other product" would include ethane, butane, etc. In addition, paragraph 14 of the agreement states that with respect to the June 29, 1979, lease provides that the royalties shall be deemed to be gross royalties and shall be calculated without regard to any post production or market enhancement costs.

My opinion is that the defendant was not entitled to take deductions from the lessors' gas or liquids, including from those where they directed PRC2 or TRN-3, as I said in my previous report.

The New Data

I have read Mr. Schopp's deposition and reviewed the exhibits to the deposition. I have rereviewed my original opinions and data which I relied upon for my previous opinion. The data
which was provided to plaintiffs' counsel in March or April and the claim by Antero that
plaintiffs' gas was not processed from August of 2018 was also reviewed. Mr. Schopp provided
sworn testimony in his deposition related to the processing issue. His testimony was consistent
with the data which I relied upon in arriving at my previous opinion, and still rely upon his
testimony with respect to his opinions as to the issue of processing of the gas.

Document AGC-001071-001100 was produced on January 16, 2020. The document is a database that has data columns as follows: Production Month, Well Name, Volume at Wellhead (MCF and MMBTU), Volume at Plant Inlet (MMBTU), Residue Gas (Volume and Value), Shrink Gas (Volume and Value), NGL (Volume and Value), Ethane (Volume and Value), Ethane Sold as Propane (Volume and Value), Propane (Volume and Value), Iso-Butane (Volume and Value), Butane (Volume and Value), and Natural Gasoline (Volume and Value),. This data is for every well for every month. This data is indicative of what is derived when raw gas is processed into residue gas and natural gas liquids (NGLs). Data of this sort is delivered by the processor to the producer on a well by well, month by month basis. It is necessary in order to allocate the volume and value of the commingled hydrocarbons to individual wells. It is obvious from this database that the gas was processed from April 2013 through August 2019.

Document AGC-012703-12730 was produced on March 27, 2020, after my initial report. The document is a database from the same wells and the same time period. The data columns in the updated spreadsheet contains the following: Production Month, Well Name, and Volume at Wellhead (MCF and MMBTU). This data base is for the time period April 2013 through January 2020. The new data represents that the gas from the plaintiffs' wells was NOT processed for the

period of September 2018 through January 2020.

If the raw gas produced from plaintiffs' wells was not processed, the data that was contained in the January 16, 2020, production for the same time period would not be available. The data from the two databases for the same time period contradicts each other. I have not seen any schematics of the gathering systems that would show that the gas from the plaintiffs' wells was not processed. It has been represented that the raw gas that enters the gathering system can either go North to a processing plant or South to a "raw gas" interconnect. If that is correct, there is no method to definitively know that the plaintiffs' gas was NOT processed. The gathering system contains commingled gas from numerous wells and each well's gas loses its identity once it enters the gathering system. I have reviewed defendants' expert report. I find nothing there which claimed the plaintiffs' gas was not processed.

Calculation of Damages

In my previous report, I attached a spreadsheet which showed the deductions wrongfully taken by Antero. I am attaching here a spreadsheet which shows each lessors' percentage ownership in each well. Consequently, this information provides data which when combined with my data and the data provided by Antero can be utilized to adjust damages for each plaintiff should the Court deem any one lease to allow for deductions. (See Exhibit 2.)

My opinions are to a reasonable degree of certainty based upon my education and experience as described in my curriculum vitae attached and as stated above and my investigation of this matter.

My opinions are that Antero did not have the right to take the deductions as identified in my previous report dated February 10, 2020. My opinion is that by virtue of the Settlement Agreement and the lease language in plaintiff's leases and the clear limitation of the enhancement clause identified above, that the right to take deductions did not come into play for the NGL's or

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the gas for these lessors.

I hold and maintain that my opinions as set forth in my original report are correct. I herein refer to it and adopt it as part of this report.

My opinion is that the original documents and data are correct and that plaintiffs' gas was and is being processed and that defendant has not paid lessors correctly for the gas and NGL's as set forth in the spreadsheet attached to my previous report.

I reserve the right to amend or modify my opinions herein should I be provided new or additional information or should I be requested to do so.

Dated this 25th day of September, 2020.

Daniel Reineke